

IN THE CLAIMS:

Please cancel claims 1-13 without prejudice or disclaimer, and substitute new Claims 14-26 therefor as follows:

Claims 1-13 (Cancelled).

14. (New) A burner for a vapour deposition process, comprising a central nozzle for ejecting a glass precursor material, said central nozzle having a concave shape.

15. (New) The burner according to claim 14, wherein said central nozzle has a symmetry about an axial plane.

16. (New) The burner according to claim 14, further comprising at least a crown of nozzles surrounding said central nozzle for ejecting a flame reactant.

17. (New) The burner according to claim 16, further comprising a circular nozzle between said central nozzle and said crown of nozzles for ejecting an innershield gas.

18. (New) The burner according to claim 17, wherein said central nozzle has first angular sectors of minimum radial dimensions and second angular sectors of maximum radial dimensions.

19. (New) The burner according to claim 18, wherein said at least a crown of nozzles comprises a first set of nozzles in the same angular positions of said second angular sectors and a second set of nozzles in the same angular positions of said first angular sectors.

20. (New) The burner according to claim 19, further comprising a first set of orifices exiting in said first set of nozzles and a second set of orifices exiting in said second set of nozzles, the orifices of the first set being inclined at a first angle with respect to a central axis of said burner and the orifices of the second set being inclined at a second angle with respect to said central axis, said second angle being greater than said first angle.

21. (New) The burner according to claim 14, having a central duct exiting in said central nozzle for the passage of said glass precursor material, and comprising a central member positioned inside the central duct for forcing the glass precursor material toward the external boundary of said central nozzle.

22. (New) The burner according to claim 21, wherein the central member has at least an enlarged portion that substantially fits with external walls of said central duct.

23. (New) A chemical vapor deposition process, comprising ejecting a stream of glass precursor material having a concave cross section.

24. (New) The process according to claim 23, further comprising producing a flame around said stream of glass precursor material and ejecting an innershield gas between said stream of glass precursor material and said flame.

25. (New) The process according to claim 23, wherein said stream of glass precursor material has a central axis, wherein said cross-section has first angular zones of maximum radial extension alternated to second angular zones of minimum radial extension, and wherein producing a flame comprises ejecting combustible gases along a first direction with respect to said axis at first angular positions corresponding to said first angular zones and along a second direction with respect to said axis at second

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angular positions corresponding to said second angular zones, said second angle being greater than said first angle.

26. (New) The process according to claim 23, wherein said stream of glass precursor material is ejected with a velocity that is maximum in a region around a central axis of said stream.